

CERTIFICATE OF TRANSMISSION BY FACSIMILE (37CFR1.8)

Docket No. IEN-10-5715-D1 (CA920010028US2)

Applicant(s): Boyaud et al.

Serial No.	Filing Date	Art Unit Group
<u>10/681,513</u>	<u>October 8, 2003</u>	<u>2811</u>

TITLE:

TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES

I hereby certify that this **REQUEST FOR CORRECTION OF A FILING RECEIPT
AND SUPPORTING DOCUMENTS**
(Identify type of correspondence)

are being facsimile transmitted to the United States Patent and Trademark Office

Fax. No. 703-746-9195 on February 4, 2004
(Date)

Alicia Keck

(Typed or Printed Name of Person Signing Certificate)

Alicia J. Keck
(Signature)

CERTIFICATE OF MAILING

I hereby certify that this document is being deposited with the U.S. Postal Service, with sufficient postage, as first class mail in an envelope addressed to U.S. Patents and Trademarks Offices, Application Processing Division's Customer Correction Branch, Washington, D.C. 20231, on this 4 day of February, 2004.

Alvin J. Keck / Alvin Keck

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Boyaud et al.**

Serial No.: 10/681,513

Filed: October 8, 2003

For: **TRANSFER MOLDING OF INTEGRATED
CIRCUIT PACKAGES**

Art Unit 2811

Attorney Docket No.: IEN-10-5163-D5 (EN9-92-080-XB)

ASSISTANT COMMISSIONER FOR PATENTS
Office of Initial Patent Examination's
Filing Receipts Corrections
Alexandria, VA 22313-1450

REQUEST FOR CORRECTION OF A FILING RECEIPT

Sir,

Enclosed is a copy of the original Filing Receipt issued by the U.S. Patent Office for the above-identified Patent Application. Due to an inaccurate identification of the title for the subject application, it is requested that the Filing Receipt be revised as follows:

Change the title to read as follows:

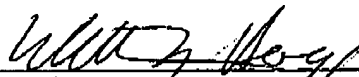
TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES

In support of this request, Applicants are also submitting a copy of the first page of the aforementioned application and a copy of the Declaration and Power of Attorney which was filed in the parent application. These documents show the correct title as it appeared in the original case and which should also be used in this divisional application.

It is believed that there are no additional fees for this correction; however if that is not the case, please charge any fees associated herewith to Deposit Account No. 09-0457.

Respectfully submitted,

Dated: 2-3-04


William N. Hogg (Reg. No. 20,156)
Driggs, Lucas, Brubaker & Hogg CO., L.P.A.
8522 East Avenue
Mentor, Ohio 44060
(440) 205-3600
Fax: 440 205 3601
E-mail: bill@driggslaw.com

WNH/ayk

Enclosures

Title

molding
Transfer ~~holding~~ of integrated circuit packages

Preliminary Class

257

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (i)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

IMPROVED TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES

CROSS-REFERENCE TO RELATED APPLICATION

This application is a divisional of application serial No.10/167,635, filed June 12,
5 2002, now Patent No. _____.

FIELD OF THE INVENTION

This invention relates to an improved method of the use of transfer molding for
encapsulating and underfilling integrated circuit chips attached to substrates to result in
10 integrated circuit packages. It also relates to the mold and apparatus used in the
improved method and the resultant integrated circuit assemblies.

BACKGROUND OF THE INVENTION

An integrated circuit chip assembly generally comprises an integrated circuit chip
attached to a substrate, typically a chip carrier or a circuit board. The most commonly
15 used integrated circuit chip is composed primarily of silicon having a coefficient of
thermal expansion of about 2 to 4 ppm/° C. The chip carrier or circuit board is typically
composed of either a ceramic material having a coefficient of thermal expansion of about
6 ppm/° C., or an organic material, possibly reinforced with organic or inorganic particles
or fibers, having a coefficient of thermal expansion in the range of about 6 to 50 ppm/° C.
20 One technique well known in the art for interconnecting integrated circuit chips and
substrates is flip chip bonding. In flip chip bonding, a pattern of solder balls is formed on
the active surface of the integrated circuit chip, allowing complete or partial population of